

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A photoelectric sensor comprising:
  - a light projection unit having a light emission element for emitting detecting light to a detection region;
  - a light reception unit having a light reception element for receiving light from the detection region to obtain a detection value corresponding to an amount of received light;
  - a target value storage unit for storing an adjustment target value for the detection value;
  - sensitivity adjustment means for adjusting at least one of a power of the detection light emitted from the light projection unit ~~and/or~~ and a conversion factor ~~from the amount of received for the light~~ received by the light reception unit ~~to the detection value, thereby matching, so as to match~~ the detection value with the target value; ~~[[and]]~~
  - adjustment instruction means for instructing execution of adjustment to the sensitivity adjusting means;
  - threshold value setting means for selecting a threshold value; and
  - comparison means for comparing the threshold value with the detection value.
2. (Currently amended) ~~A~~ An amplifier of the photoelectric sensor according to claim 1, comprising of an amplifier a separation type amplifier.
3. (Currently amended) ~~A~~ An amplifier of the photoelectric sensor according to claim 1 ~~[[of]]~~ comprising a fiber type amplifier.
4. (Currently amended) The photoelectric sensor according to claim 3, wherein the target value is set ~~or can be set~~ in the middle portion of one third of ~~[[the]]~~ a range of detection values ~~that can be handled after sensitivity adjustment; therefore,~~ whereby the target value can be used in common with ~~cases of fiber arrangements of a~~ transmission type and ~~[[a]] reflection type~~ fiber type sensor arrangements.

5. (Original) The photoelectric sensor according to claim 1, further comprising: output means for outputting the detection value as an analog signal such as a voltage value or a current value or, alternatively, as a signal showing a digitized numerical value.

6. (Cancelled)

7. (Currently amended) The photoelectric sensor according to claim ~~[[6]]~~ 1, wherein the threshold value setting means is used for manual setting, the photoelectric sensor further comprising display means for numerically displaying the threshold value.

8. (Currently amended) The photoelectric sensor according to claim ~~[[6]]~~ 1, wherein the threshold value setting means is used for selecting one of plural threshold values prepared for use in advance, the photoelectric sensor further comprising display means for displaying which one of the plural threshold values is selected.

9. (Original) The photoelectric sensor according to claim 1, further comprising: target value change means.

10. (Currently amended) An adjustment method for a photoelectric sensor, comprising the steps of:

performing sensitivity adjustment in a state where no object exists using the photoelectric sensor according to claim ~~[[6]]~~ 1; and

performing threshold value setting so that a threshold value takes a predetermined value after execution of the sensitivity adjustment.

11. (Currently amended) An adjustment method for a photoelectric sensor, comprising the steps of:

installing plural photoelectric sensors according to claim ~~[[6]]~~ 1, in a predetermined usage situation;

performing sensitivity adjustment on the plural photoelectric sensors in a state where no detection object exists; and

performing threshold value setting on the plural photoelectric sensors so that all of threshold values of the plural photoelectric sensors takes the same predetermined value after execution of sensitivity adjustment.

12. (New) A photoelectric sensor arrangement comprising:

a plurality of photoelectric sensors each comprising:

a light projection unit having a light emission element for emitting detecting light;

a light reception unit having a light reception element for receiving reflected detecting light and configured to produce a detection value corresponding to an amount of reflected detection light which is received;

a target value storage unit for storing an adjustment target value for the detection value;

sensitivity adjustment means for adjusting at least one of a power of the detection light emitted from the light projection unit and a conversion factor of the reflected detection light received by the light reception unit, to the detection value, so as to match the detection value with the target value;

adjustment instruction means for instructing execution of adjustment to the sensitivity adjusting means;

a selected one of the plurality of photoelectric sensors having:

threshold value setting means for setting a threshold value; and

comparison means for comparing the threshold value with the detection value.